DOCUMENT RESUME

ED 175 062 CS 502 579

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TITLE A Method of Assessing Perceptions of Organizational Conditions and Prospects for Change.
PUB DATE [79]
NOTE 21p.; Study prepared at Howard University

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Change Strategies; Communication (Thought Transfer); Evaluation Methods; *Measurement Instruments; Organizational Change; *Organizational Communication; *Organizations (Groups); *Perception; Research Methodology; Test Construction

ABSTRACT

This paper discusses a three-dimensional research procedure that is used to assess the perceptions of individuals concerning an organization's existing, ideal, and possible operational conditions. It describes procedures used to develop instruments responsive to the varied interests, concerns, and positions of organizational members or publics. In addition, it discusses procedures and criteria that have been used to assess the strength and usefulness of instrument items to respondents; to analyze areas of agreement, disagreement, or no substantial concern to respondents; to identify subgroups based upon differences in perceptions; and to analyze the degree of stability and optimism for change concerning specific conditions. (Author/FL)

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A METHOD OF ASSESSING PERCEPTIONS OF ORGANIZATIONAL CONDITIONS AND PROSPECTS FOR CHANGE

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A METHOD OF ASSESSING PERCEPTIONS OF ORGANIZATIONAL CONDITIONS AND PROSPECTS FOR CHANGE

PURPOSE AND BACKGROUND

This paper discusses a three dimensional instrument and technique for analyzing the perceptions of targeted groups or individuals concerning:

1) those conditions which exist within an organization,
2) those conditions which are considered ideal, and
3) the degree to which change in gaps between what exists and what is ideal is considered to be possible within some specified period of time.

The technique enables the analysis of areas of agreement, disagreement, and no substantial concern among respondents in relation to all three views (existing--ideal--possible.) Such perceptions are also used to identify sub-groups with differing or conflicting views. Further, a view of respondents' relative optimism (or pessimism) regarding organizational change is achieved by analyzing their views of what characteristics they consider it possible to achieve in the future in relation to gaps between their perceptions of what exists and what they consider ideal.

This approach is a natural extension in studies of the condition of organizations. It parallels the changes and extensions of thought

and understandings in organization behavior and management. As organization and management theory and practice have evolved from the frequently abusive assumptions about people of the classical school and come to focus more on human concerns and values in relation to organizations, increasing emphasis has been placed upon sensitive assessment of organizational conditions as viewed by various internal and external groups or publics. Such assessments have generally matched the character of managerial thinking or motives which have sponsored them. Thus, specific assessments have varied with regard to the issues or positions assessed, their focus (on the past, present, or future, or some combination thereof,) and the intended use of the results (such as justification, development or change.) The following generalizations may be made about such studies:

1) Most condition assessments undertaken for operational (as distinguished from academic) purposes are conducted using instruments which reflect managerial concerns and perceptual fields. As such, they may or may not reflect the concerns or perceptual fields of various groups or publics involved in the assessment.

2) Most condition assessments focus on the past or present (the existing.) Some combine attempts to determine what is desired (the ideal.) Fewer yet focus on determining the gaps which exist between what exists and is considered ideal or desirable (a planning or potentially future-foucsed study.) Fewer still focus on discerning what respondents feel it is is possible to achieve within or related to an organization (future-focused and change oriented study.)

The technique discussed herein has the potential of spanning all of these possibilities. Its sensitivity and openness are dependent only upon the purposes and motives of those ordering, planning and implementing the study.

THE THREE DIMENSIONAL CONDITION ASSESSMENT PROCEDURE

While there are no inherent constraints which preclude the use of a different set of steps in a three dimensional study, the following are suggested based upon field experience:

1. Definition of client problems, concerns, interests, constraints, support available, expectations of the study and use of results.
2) Instrument development.
3) Sample and sampling system definition.
4) Field operations, data collection and management planning.
5) Analysis plan definition.
6) Study reporting formats, media, and strategies definition.

The discussion which follows relates to each of these basic steps.

Definition of Client Problems. The advisability of thorough definition of client problems and interests related to the study is obvious. However, the extent and type of support available is also critical in a three dimensional study in a field situation--particularly where the respondents may be organizationally and geographically dispersed. Equally important, from a standpoint of assuring operational usefulness, are determining client expectations in terms of the nature and specificity of information gained through the study and how those results are expected

to be used in dealing with the client's problems. An analytic approach which identifies and relates problems, problem related variables, information interests, action planning and decisions systems, with desired results or altered organizational conditions is strongly suggested.

Instrument Development. The three dimensional condition assessment technique collects responses to items describing conditions or opinions concerning the organization. A seven point interval scale is used with points on the scale defined as:

1) Strongly Characteristic
2) Characteristic
3) Tends to be Characteristic
4) Neither Characteristic or Uncharacteristic; Don't know; Doesn't Apply
5) Tends to be Uncharacteristic
6) Uncharacteristic
7) Strongly Uncharacteristic

Each item in the instrument receives three scores, one for each view:

1) The existing (work environment/organizational atmosphere) at (X company/ Y institution.)
2) My concept of the ideal (work environment, etc.) at (X company, etc.)
3) The (work environment, etc.) that it would be possible to create within the next (period of time) at (X company.)

The views specified for respondents may be as holistic or as specific as desired. They may deal with a broad spectrum of issues or topics (such as supervision, rewards, working conditions, benefits, personal relationships, organization structure, managerial style, etc.)

or any one topic or issue. Of course, the depth of information collected is a function of the number of items and topical areas or issues covered.

The effective length of the instrument is three times the number of items. Thus, a sixty item instrument may require a fairly long period of time to complete. Experience indicates that instruments dealing with fewer topics require less time than those covering many topics. Experience also indicates that the time required by respondents will vary greatly. For instance, on a seventy item instrument (effective length 210 items), respondents reported completion times ranging from 45 minutes to over 2 hours.

Instrument development involves:

1) Determining the breadth of topics or issues.

2) Determining the items to be used.

3) Testing the instrument.

Breadth of topics is a function of the client's problems or concerns, constraints, expectations of and anticipated use of the study.

Items for the instrument may be specified by the client, based upon topics found in the literature, elicited from the respondent group(s) for the study, or any combination thereof. A combination of all approaches is recommended to assure a) responsiveness to the expressed concerns of the client, b) inclusion of respondent as well as client views or interests, and c) to make it possible to relate the results of the study to broader theoretical or interorganizational and management frameworks.

Typical instrument development and test procedures have included:

1) Identifying factors (issue or interest areas) of the client and relating them to expectations of the study.
2) Gathering items from respondent group members on an open ended basis (but using the client factor list in a focused interview format where necessary.) In studies where opposing positions are evident, care is taken to elicit items covering all views.
3) Constructing items based upon the literature.
4) Review, categorization and reduction of items by judges to identify major factors of the instrument and to assure coverage of factors of concern to the client.
5) Test of items (using randomly selected individuals from the respondent group(s) to identify duplications, ambiguous statements, improve language, and to determine the items which differentiate among respondents.
6) Review and revision of the resulting instrument to reduce it to a desired length. (This may require several permutations of steps 5 and 6.)
7) Development of a separate instrument to collect demographic data of interest in the analysis of the primary instrument.

Sample and Sampling System Definition. A variety of approaches ranging from population studies to quota, stratified random, and random sample studies may be appropriate depending upon the circumstances of the study. The strengths and weaknesses of each approach persists in the

use of the three dimensional technique.

In problem oriented situations where differing positions are held, it may be necessary (in a random sample study) to include specific individuals known to hold varying views in order to assure that all views are represented in the study results. Indeed, where the study is focused on yielding data to be used in change actions, such a procedure may be necessary to adequately deal with allegations of bias. If those holding such positions are identifiable and are included along with a random sample, the relative size of specific factions may be estimated. Also, possibilities for closing gaps among subgroups based upon their commonalities may be identified.

Field Operations, Data Collection and Management Planning. These concerns require individualized attention and procedures on a study by study basis. However, experience suggests the following:

1) Due to the time requirement (and variations for various respondents) personal contact to obtain agreement to participate is recommended.
2) Where mail solicitation or return of instruments is used, a follow-up system which maintains respondent anonymity but informs the researcher of completion and return of instruments will aid in efficient follow-up procedures to maximize returns.

Analysis Plan Definition. Analysis of a three dimensional instrument may include the following:

1) Analysis of the "usefulness" of items to the study respondents.
2) Analysis of respondent's "loading" on items for each view

(existing/ideal/possible.)

3) Analysis of respondents' changes in "loading" on items from view to view (existing/ideal/possible.)

4) Differentiation of subgroups among respondents based on "loadings."

5) Analysis of subgroups in terms of selected demographic variables.

Several decision systems have been used for these analyses. Item "usefulness" is based upon decision rules which separate items into groups based upon the relative use of polar positions (1,2,6,7) on the rating scale and the midpoint (4) on the scale. High loadings on the polar positions and low loadings on the midpoint result in categorization as a "highly useful" (or operational) item. That is, subjects are decisive in using it and potentially differential among themselves in using the item to describe their views.

Exhibits 1, 2, and 3 illustrate the results of analysis of item "usefulness" in a three dimensional study. Exhibit 1 illustrates the clustering of items in terms if the frequency of scoring at the polar and midpoint positions when viewing the "existing" dimension of the instrument. No item received fewer than 20% of all scores at the polar positions, and only six items were scored at the midpoint more than 21% of the time. All items in the instrument were judged useful from the standpoint of the respondents finding them to be operational constructs and in using them differentially to express their views. only two items (8 and 57) are potentially weak.

Exhibit 2 shows the clustering of the same items on the "ideal" dimension. All items were judged useful, and only one item was judged to be potentially weak (21). Exhibit 3 clusters the items on the "possible" dimension. Again, all items were judged "useful" and three items were judges potentially weak (10, 21 and 38.) All of the potentially weak

items in this study involved one factor in the instrument. But, none of the items were "weak" for all three dimensions, and only one was "weak" in viewing two dimensions.

Such results in evaluating item usefulness to respondents is not unusual when the instrument is developed using the item development procedure previously suggested.

Item "loading" is based upon decision rules which consider the strength (percent of scores on the polar points of the scale) and the dispersion (percent of scores clustered toward one pole or the other.) The result of the system is to categorize items in terms of relative strength of their scoring patterns and in terms of the homogeneity of the respondents' scoring of them.

Exhibits 4, 5 and 6 illustrate the results of item "loading" analysis in the same three dimensional study. Changes in strength and dispersion for individual items is marked in this case, showing significant variations between what the respondents perceived "existed," felt would be "ideal," and felt would be "possible" to achieve in relation to many of the items. Indeed, in this case, there was considerable difference concerning the "existing" condition, some very strong agreements concerning the "ideal," and a great deal of pessimism about what it would be "possible" to achieve.

Analysis of "loadings" for any single dimension involves these basic processes:

1) Chart the data.
2) Interpret the data on the basis of similarities and differences of perceptions and identify items of little apparent concern.
3) Interpret the data focusing on various factors or issues of concern.

For "comparison" of the three views (existing/ideal/possible) the approach suggested is to compute the ratio of scoring at the polar positions of the scale (1,2,6,7.) The resulting comparison identifies the similarity or difference in scoring each item when used to describe the existing, an ideal or possible environment. The analysis does not reliably indicate the dispersion (or homogeneity) of respondents' scoring on the item. No explicit criteria have been established for decisions concerning the significance of differences among scoring ratios since cross reference between the item "loading" analyses and the item "comparison" ratios is required for consistent interpretation. However, the "comparison" ratios are quite descriptive to the viewer of the data. For instance:

Table 1: Comparison Ratios for Selected Items

Item	Existing	Ideal	Possible
1	18.1	18.0	17.5
3	1.2	1.4	1.0
5	3.6	86.0	15.1
62	53.0	27.5	1.7

The underscored numbers indicate polarity toward the 1,2 positions on the scale. Item 1 indicates a strong homogeneity within the group with no significant change in the groups' position under any of the three dimensions. Item 3 indicates a great deal of heterogeneity within the group with each view, and indicates some trend of pessimism since what is deemed possible moves away from the "existing" and "ideal." It is, however, an item of basic disagreement.

Item 5 shows fairly strong differences when viewing the "existing" but virtual unanimity in terms of what is "ideal." Some optimism for

change toward the groups' idealized environment is also demonstrated. Item 62 indicates very strong agreement concerning what "exists," quite strong agreement about what is "ideal" (which is quite different from what exists,) and indicates strong disagreement (or pessimism) about what it is "possible" to achieve.

The interpretative values of the "comparison" ratios combined with the item "loading" information seems to far exceed that which is supplied through statistical tests. Nevertheless, the contrasts are such that the results of statistical tests with large samples are generally predictable. Exhibit 7 is a listing of polar score ratios for the study mentioned previously.

Grouping respondents according to their perceptions has been accomplished through a Q-type factor analysis using orthogonal rotation. Such analyses have been conducted using all items in a study or limiting the items to those of some factor of special concern. The analysis of sub-group membership in terms of various demographic variables has been accomplished through factor analysis and the construction of cross breaks.

Other approaches to the data are quite possible, depending upon the interests of the researcher or the client. For instance, multiple regression and discriminant analyses are strong possibilities for interesting investigation of the data.

Report Formats, Media and Strategies. Report formats, media and strategies should be based upon the client's anticipaced use of study results. The formats included herein are useful in illustrating variations in respondents' positions and perceptions. However, descriptions

of total group and sub-group perceptions based upon the items and focused upon special areas of concern are perhaps the most useful to planners of specific change efforts.

CONCLUSION

The three dimensional condition assessment technique described has been proved to be sensitive and useful in the analysis of organizational problems and dynamics. It offers the possibility of enriching organizational studies by enabling forward focused analysis of the perceptual constraints to organization development among group members. It also makes possible the measurement of perceptions of an organization by its publics over time and with the added advantage of understanding predispositions of the group to not expect change and, therefore, not accept or believe communications concerning such change when they occur.

Further studies with modified scale definitions are planned. Specifically, the independent declaration of items as being irrelevant will be tested. Altered approaches to identifying sub-groups are also planned. One approach planned is to remove from the data base those items of virtual unanimous agreement before conducting grouping procedures. Such items do not differentiate among respondents and may, when they occur in too great a number, have excessive impact on grouping procedures.

EXHIBIT 1 : DECISION RULES FOR DATA ANALYSIS--ITEM USEFULNESS

Low = Over 21% of Ss score 4 and less than 20% of Ss score 1,2,6,7
Medium = 11 to 21% of Ss score 4 and 20 to 40% of Ss score 1,2,6,7
High = Less than 11% of Ss score 4 and more than 40% score 1,2,6,7

Group: X--Existing

Score 4

Score 1,2,6,7	Low 21%	Medium 11 - 21%	High 11%
Low 20%			
Medium 20 -40%	8,57 (2)	26,38,46,64,66,69 (6)	7,16,21,34,36 39,54,55,63,65 67,68 (12)
High 40%	2,3,37,61 (4)	10,17,22,25,31,33,35 (7)	1,4,5,6,9,11 12,13,14,15,18 19,20,23,24,27 28,29,30,32,40 41,42,43,44,45 47,48,49,50,51 52,53,56,58,59 60,62,70,71,72 (41)

EXHIBIT 2: DECISION RULES FOR DATA ANALYSIS--ITEM USEFULNESS

Low = Over 21% of Ss score 4 and less than 20% of Ss score 1,2,6,7
Medium = 11 to 21% of Ss score 4 and 20 to 40% of Ss score 1,2,6,7
High = Less than 11% of Ss score 4 and more than 40% score 1,2,6,7

Group: X--Ideal

Score 4

Score 1,2,6,7	Low 21%	Medium 11 - 21%	High 11%
Low 20%			
Medium 20-40%	21 (1)		
High 40%	2,3,9,10,33,37 38,57,61 (9)	8,16,17,18,22,31 32,34,35,36,43,44 46,53,58,66,69,72 (18)	1,4,5,6,7,11,12 13,14,15,19,20,23 24,25,26,27,28,29 30,39,40,41,42,45 47,48,49,50,51,52, 54,55,56,59,60,62 63,64,65,67,68,70, 71 (44)

EXHIBIT 3: DECISION RULES FOR DATA ANALYSIS--ITEM USEFULNESS

Low = Over 21% of Ss score 4 and less than 20% of Ss score 1,2,6,7
Medium = 11 to 21% of Ss score 4 and 20 to 40% of Ss score 1,2,6,7
High = Less than 11% of Ss score 4 and more than 40% score 1,2,6,7

Group: X--Possible

Score 4

Score 1,2,6,7	Low 21%	Medium 11 - 21%	High 11%
Low 20%			
Medium 20-40%	10, 21, 38 (3)	16,18,26,34,35,36 43,44,46,47,49,55 66,72 (14)	23,25,30,39,40,41 42,45,48,51,52,58 59,62,67 (15)
High 40%	2,3,37,57,61 (5)	8,9,15,17,22,29 31,32,33,53,63,64 69 (13)	1,4,5,6,7,11,12 13,14,19,20,24,27 28,50,54,56,60,65 68,70,71 (22)

EXHIBIT 4: DECISION RULES FOR DATA ANALYSIS--ITEM LOADING

Strength:
Low = Less than 40% of Scores are 1,2,6 or 7
Medium = 40 to 60% of Scores are 1,2,6 or 7
High = More than 60% of Scores are 1,2,6 or 7

Dispersion:
Low = 6:1 or greater ratio of Scores 1,2,6,7 to either pole
Medium = 2.5:1 to 6:1 ratio of Scores 1,2,6,7 to either pole
High = 2.5:1 or lesser ratio of Scores 1,2,6,7 to either pole

Group: X---Existing

Strength: % Scores 1,2,6,7

Dispersion: Scores 1,2,6,7 to either pole	Low 40%	Medium 40 - 60%	High 60%
High 2.5:1	7,8,34,36,38,46 55,64,65,68,69,54 57 (13)	2,3,6,10,11,14 19,20,31,33,50,70 71 (13)	
Medium 2.5:1 to 6:1	16,21,26,39,63 (5)	5,13,15,17,18,22 23,30,35,45,48,52 53,72 (14)	12 (1)
Low 6:1	66,67 (2)	4,9,25,27,32,37 41,42,43,44,47,56 58,61,62 (15)	1,24,28,29,40,49 51,59,60 (9)

EXHIBIT 5: DECISION RULES FOR DATA ANALYSIS--ITEM LOADING

Strength:
Low = Less than 40% of Scores are 1,2,6 or 7
Medium = 40 to 60% of Scores are 1,2,6 or 7
High = More than 60% of Scores are 1,2,6 or 7

Dispersion:
Low = 6:1 or greater ratio of Scores 1,2,6,7 to either pole
Medium = 2.5:1 to 6:1 ratio of Scores 1,2,6,7 to either pole
High = 2.5:1 or lesser ratio of Scores 1,2,6,7 to either pole

Group: X---Ideal

Strength: % Scores 1,2,6,7

Dispersion: Scores 1,2,6,7 to either pole	Low 40%	Medium 40 - 60%	High 60%
High 2.5:1		2,15,27,29,30,33 34,35,36,38,43,45 58,69 (14)	3,13,22,24,32 (5)
Medium 2.5:1 to 6:1	21 (1)	26,37,40,44,46,47 49,51,53,72 (10)	17,18,23,28,31 (5)
Low 6:1		55,61 (2)	1,4,5,6,7,8,9 10,11,12,14,16,19 20,25,39,41,42,48 50,52,54,56,57,59 60,62,63,64,65,66 67,68,70,71 (35)

EXHIBIT 6: DECISION RULES FOR DATA ANALYSIS--ITEM LOADING

Strength:
Low = Less than 40% of Scores are 1,2,6 or 7
Medium = 40 to 60% of Scores are 1,2,6 or 7
High = More than 60% of Scores are 1,2,6 or 7

Dispersion:
Low = 6:1 or greater ratio of Scores 1,2,6,7 to either pole
Medium = 2.5:1 to 6:1 ratio of Scores 1,2,6,7 to either pole
High = 2.5:1 or lesser ratio of Scores 1,2,6,7 to either pole

Group: X---Possible

Strength: % Scores 1,2,6,7

Dispersion: Scores 1,2,6,7 to either pole	Low 40%	Medium 40 - 60%	High 60%
High 2.5:1	18,21,23,26,30,34 36,38,41,43,44,45 46,47,49,51,58,59 62,66,67 (21)	2,3,9,12,13,17 22,24,31,33,63,69 (12)	
Medium 2.5:1 to 6:1	10,16,25,35,39,40 42,52,55 (9)	4,14,15,19,27,28 29,32,53,56,57,60 65,70 (14)	
Low 6:1	48,72 (2)	7,8,11,20,37,50 54,61,64,68,71 (11)	1,5,6 (3)

EXHIBIT 7: RATIO OF POLAR SCORES 1,2 to 6,7

Item	Existing	Ideal	Possible	Item	Existing	Ideal	Possible
1	(18.1)	(18.0)	(17.5)	37	(9.0)	(3.0)	(6.8)
2	2.2	(1.4)	(1.0)	38	2.1	(1.5)	1.4
3	1.2	1.4	(1.0)	39	4.0	(60.0)	(3.7)
4	(6.3)	13.0	2.6	40	14.2	(5.1)	3.0
5	(3.6)	(84.0)	(15.2)	41	7.6	(70.0)	(2.3)
6	(1.4)	(26.0)	(11.0)	42	9.0	(20.3)	(3.0)
7	1.2	(8.4)	(8.0)	43	6.8	(1.5)	(1.0)
8	2.1	67.0	10.0	44	(51.1)	3.0	(2.1)
9	(12.1)	9.6	1.0	45	4.3	(2.4)	1.3
10	(1.6)	7.3	2.6	46	(2.4)	4.5	1.0
11	(1.1)	(25.3)	(7.5)	47	25.0	(3.5)	1.5
12	5.4	(25.6)	(2.2)	48	2.8	(64.0)	(7.7)
13	(5.5)	1.9	(1.0)	49	18.6	(4.7)	1.6
14	1.1	14.0	3.6	50	1.3	(36.0)	(7.0)
15	(4.5)	(1.8)	(3.1)	51	33.0	(3.3)	1.1
16	(5.8)	60.0	4.5	52	3.7	(77.0)	(5.4)
17	3.4	(5.4)	(1.2)	53	(5.0)	(1.1)	(3.0)
18	5.1	(5.4)	(1.5)	54	1.8	(72.0)	(6.4)
19	2.0	(11.2)	(3.4)	55	1.0	(25.0)	(5.2)
20	1.3	(36.0)	(6.2)	56	6.3	(74.0)	(3.6)
21	3.8	(2.6)	(2.1)	57	2.3	32.0	5.4
22	4.2	(2.3)	(1.0)	58	(6.0)	2.0	(1.2)
23	4.4	(5.2)	(1.3)	59	11.8	(7.2)	1.1
24	8.8	(1.0)	2.3	60	14.0	(70.0)	(2.8)
25	6.1	(20.3)	(3.1)	61	(8.0)	6.8	8.5
26	(3.3)	4.4	1.8	62	(53.0)	27.5	(1.7)
27	(24.0)	1.0	(4.4)	63	(3.2)	22.0	2.3
28	13.4	2.5	3.8	64	(1.0)	41.0	6.8
29	35.0	1.0	3.9	65	(2.2)	79.0	4.2
30	3.8	(2.1)	1.0	66	(13.5)	11.0	1.1
31	1.1	(5.7)	(2.3)	67	(34.0)	16.2	1.6
32	(6.3)	1.1	(2.6)	68	(1.8)	(36.0)	(13.3)
33	2.3	2.1	1.8	69	(1.0)	1.4	(1.1)
34	(1.2)	2.4	1.1	70	1.7	(79.0)	(3.6)
35	(2.5)	(1.2)	(3.5)	71	2.4	(74.0)	(6.6)
36	(1.2)	(2.0)	(1.5)	72	(3.8)	(3.5)	(10.3)

Key: (18.1) = Ratio weighted to 1,2 pole
18.1 = Ratio weighted to 6,7 pole